AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. (Original) A method for adjusting capacitance of an on-chip capacitor, comprising the steps of:

providing the on-chip capacitor, wherein the on-chip capacitor has at least one material layer having a dielectric constant that defines a capacitance of the on-chip capacitor; and

exposing said at least one material layer to an ion beam comprising ions of at least one material, thereby modifying the dielectric constant of said at least one material layer to effect a change in said capacitance of the on-chip capacitor.

2. (Original) The method of claim 1, wherein said at least one material layer is comprised of at least one of silicon dioxide (SiO_2), barium-strontium titanate $(Ba,Sr)TiO_3$, porous organosilicate, titanium oxide, tantalum oxide, zierconium oxide, yittrium oxide, aluminum oxide, and silicon nitride.

3. (Original) The method of claim 1, wherein said at least one material comprises at least one of fluorine (F_2), oxygen (O_2), and nitrogen.

4. (Original) The method of claim 1, wherein said ion beam is a focused ion beam having a controlled concentration of ions.

5-8. (Cancelled)

9. (Currently Amended) A method for adjusting capacitance of an on-chip capacitor formed on a substrate, comprising the steps of:

providing the substrate to a substrate processing chamber having a substrate support pedestal and a substrate positioning system;

irradiating a dielectric material of the on-chip capacitor using an ion beam ~~comprising~~ comprised of ions, thereby modifying a dielectric constant of said dielectric material to effect a change in a capacitance of the on-chip capacitor; and

monitoring said capacitance of the on-chip capacitor.

10. (Original) The method of claim 9, wherein said dielectric material comprises at least one of silicon dioxide (SiO_2), barium-strontium titanate ($Ba,Sr)TiO_3$, porous organosilicate, titanium oxide, tantalum oxide, zierconium oxide, yittrium oxide, aluminum oxide, and silicon nitride.

11. (Original) The method of claim 9, wherein said ion beam comprises at least one of fluorine (F_2), oxygen (O_2), and nitrogen.

12. (Original) The method of claim 9, wherein said ion beam is a focused ion beam having a controlled concentration of ions.

13. (Currently Amended) The method of claim 9 wherein said irradiating step is ~~implementing~~ implemented in accordance with at least one processing parameter, wherein said at least one processing parameter defines a concentration of said ions, an intensity of said ion beam, or a time duration of applying said ion beam.

14-18. (Cancelled)